

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

CLAIMS

1-19. (cancelled)

20. (currently amended) A process for preparing a furanose comprising:

- (a) reacting aqueous CaO with a cyclic ether that contains a hydroxyl and a CH₂OH on the carbon adjacent to the ring oxygen, thereby forming a furanyl lactone;
- (b) optionally protecting the furanyl lactone with a protecting group if necessary;
- (c) reacting the optionally protected furanyl lactone with a reducing agent selected from the group consisting of NaHTe, Sml₂, H₂ and a Pd-phosphine catalyst and LiAl(O^tBu)₃H to reduce the lactone to a hydroxyl group, creating a furanose product compound; and
- (d) optionally reacting the furanose product compound with a protecting group.

21. (original) The process of claim 20 wherein the cyclic ether reacted with CaO is D-fructose.

22. (original) The process of claim 20 wherein the furanyl lactone is 2-C-methyl-D-ribono-lactone.

23. (original) The process of claim 20 wherein the protected furanyl lactone is 2,3,5-tri-O-benzoyl-2-C-methyl-D-ribono-lactone.

24. (original) The process of claim 20 wherein the furanose is 2,3,5-tri-O-benzoyl-2-C-methyl-β-D-ribofuranose.

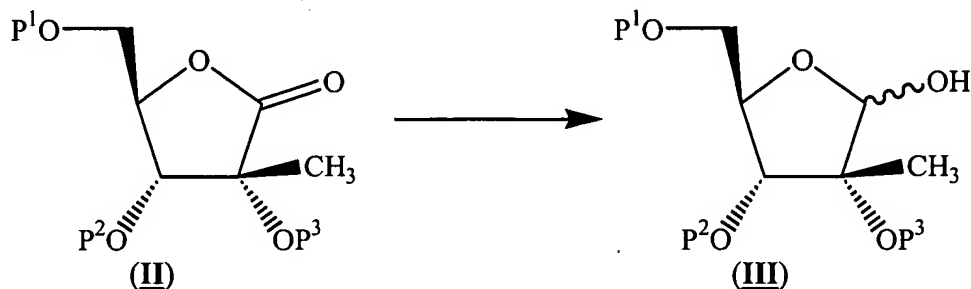
25. (original) The process of claim 20 wherein the protected furanose is 1,2,3,5-tetra-O-benzoyl-2-C-methyl-β-D-ribofuranose.

26. (original) The process of claim 20 wherein the protecting group is selected from the group consisting of silyl, benzoyl, p-toluoyl, p-nitrobenzoyl, p-chlorobenzoyl, acyl, acetyl, -(C=O)-alkyl, and -(C=O)-aryl, optionally substituted with one or more groups not affected by the reducing agent of step (c).

27. (original) The process of claim 26 wherein the protecting group is benzoyl.

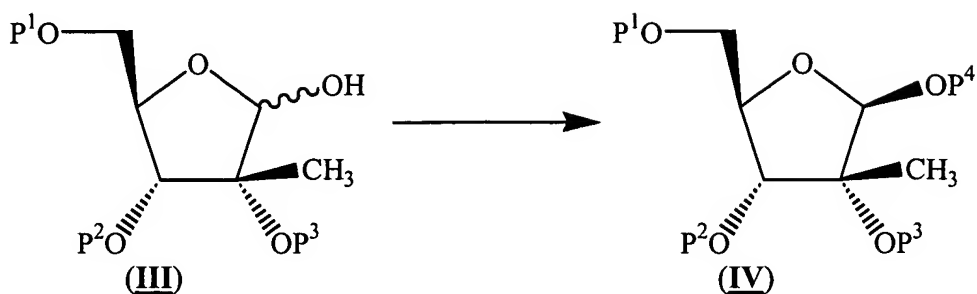
28. (original) The process of claim 26 wherein the protecting group is $-(C=O)$ -alkyl.
- 29-30. (cancelled)
31. (currently amended) The process of claim 20 wherein the reactions are carried out in solvent selected from the group consisting of water, TEA, DMAP, DME, toluene, THF, dioxane, acetonitrile, DMF, DMSO, dimethylacetamide and ethanol.
32. (original) The process of claim 20 wherein the reaction temperature varies from about -5°C to about 50°C for the first product compound lactone.
33. (original) The process of claim 20 wherein the total time for synthesis is from about 5 days to about 14 days.
34. (original) The process of claim 33 wherein the total time for synthesis is from about 5 days to 10 days.
35. (original) The process of claim 33 wherein the total time for synthesis is about 60 hours.
36. (currently amended) A process comprising:
- (a) reacting aqueous CaO with D-fructose ~~for about 5 hours to about 25 hours at a temperature from about 23°C to about 40°C ;~~
 - (b) reacting the product from step (a) with CO_2 and oxalic acid ~~for about 8 hours to about 12 hours,~~ to form 2-C-methyl-D-ribonolactone;
 - (c) reacting 2-C-methyl-D-ribonolactone with benzoyl chloride ~~for about 3 hours to about 6 hours~~ to provide 2,3,5-tri-O-benzoyl-2-C-methyl-D-ribonolactone;
 - (d) reducing 2,3,5-tri-O-benzoyl-2-C-methyl-D-ribonolactone with ~~Red Al/ethanol for about 30 to about 60 minutes at a temperature of from about -5°C to about 0°C a~~ reducing agent selected from the group consisting of NaHTe, SmI_2 , H_2 and a Pd-phosphine catalyst and $\text{LiAl}(\text{O}^i\text{Bu})_3\text{H}$ to afford 2,3,5-tri-O-benzoyl-2-C-methyl- β -D-ribofuranose;
 - (e) benzoylating 2,3,5-tri-O-benzoyl-2-C-methyl- β -D-ribofuranose in solvent ~~for about 4 hours to about 14 hours at a temperature of from about 0°C to about 50°C~~ to form 1,2,3,5-tetra-O-benzoyl-2-C-methyl- β -D-ribofuranose; and
 - (f) optionally isolating the 1,2,3,5-tetra-O-benzoyl-2-C-methyl- β -D-ribo-furanose.
37. (currently amended) The process of claim 36, step (a), wherein the reaction time is from about ~~6~~ 5 to about ~~22~~ 25 hours.
38. (original) The process of claim 36, step (a), wherein the temperature is from about 23 to about 40°C .

39. (original) The process of claim 36, step (c), wherein the solvent is DME.
40. (currently amended) The process of claim 36, step (c), wherein the reaction proceeds for about ~~4 hours~~ 3 to 6 hours.
41. (currently amended) The process of claim 36, step (d), wherein reduction proceeds for about ~~40~~ 30 to 60 minutes.
42. (original) The process of claim 36, step (d), wherein the solvent comprises toluene.
43. (original) The process of claim 36, step (e), wherein the solvent comprises DME.
44. (currently amended) The process of claim 36, step (e), wherein the temperature is from about ~~50~~ 0 to about 50 °C, ~~and the reaction runs for from about 4 to about 12 hours.~~
- 45-49. (cancelled)
50. (currently amended) A process for preparing an optionally protected 2-C-methyl-β-D-ribofuranose compound comprising:
 - (a) reducing an optionally protected 2-C-methyl-D-ribonolactone with ~~Red-Al/ethanol~~ a reducing reagent selected from the group consisting of NaHTe, SmI₂, H₂ and a Pd-phosphine catalyst or LiAl(O^tBu)₃H to obtain an optionally protected 2-C-methyl-β-D-ribofuranose.
- 51-63. (cancelled)
64. (currently amended) A process for preparing an optionally protected 2-C-methyl-β-D-ribofuranose comprising the steps of:
 - (a) reducing an optionally protected 2-C-methyl-D-ribonic lactone with a reducing agent selected from the group consisting of NaHTe, SmI₂, H₂ and a Pd-phosphine catalyst and LiAl(O^tBu)₃H



wherein each P¹, P², and P³ is independently hydrogen or a suitable oxygen protecting group;
 and then

- (b) optionally protecting the ribofuranose derivative compound of the previous step to form an optionally protected 2-C-methyl-β-D-ribofuranose



wherein P⁴ is independently hydrogen or a suitable oxygen protecting group.

65. (original) The process of claim 64, wherein, each P¹, P², P³, and P⁴ is independently hydrogen or an acyl.
66. (original) The process of claim 64, wherein, each P¹, P², P³, and P⁴ is independently hydrogen or a benzoyl.
67. (currently amended) The process of claim 64, wherein the reducing agent is ~~sodium bis(2-methoxyethoxy)aluminum hydride (Red-Al)~~ LiAl(O^tBu)₃H, optionally in a solvent.
68. (currently amended) The process of claim ~~67~~ 64, wherein ~~the solvent is ethanol~~ the reducing agent is H₂ and a Pd-phosphine catalyst.
- 69-88. (cancelled)
89. (new) The process of claim 64, wherein the reducing agent is NaHTe.
90. (new) The process of claim 64, wherein the reducing agent is SmI₂.